Somaiya Vidyavihar University

Brainstorming Session on:

Reimagining the Information Profession: iSchools, a forward?

April 29, 2021 : 2 pm to 6 pm (IST)

Report

In the context of reinitiating the iSchool movement in India and the idea of establishing an iSchool at Somaiya Vidyavihar University (SVU), Mumbai being mooted and considered, a brainstorming session on "Reimagining the Information Profession: iSchools, a way forward?" was organized on April 29, 2021 by the SVU Library and the Department of Library & Information Science in collaboration with the Department of Data Science and Technology, K J Somaiya Institute of Management, Department of Computer Engineering, K J Somaiya College of Engineering and K J Somaiya Institute of Engineering & Information Technology. The four-hour event programmed in three sessions had twelve speakers — five representing the iSchools worldwide, six leading educationists from India, and one representing the information industry.

Professor V. N. Rajasekharan Pillai, Vice-Chancellor of Somaiya Vidyavihar University (SVU) and the force driving force behind the program, welcomed the speakers and other participants. He kickstarted the session and brought earnestness and vigor to the program with his participation throughout the entire brainstorming session. Professor Shalini Urs, former Executive Director and Professor of the International School of Information Management (ISiM), University of Mysore, and Program Chair of the brainstorming session, set the tone for the session's theme with an overview of the origin and trajectory of the iSchool movement. She highlighted some significant milestones and exemplars such as the University of Michigan's School of Information, University of California, Berkeley, and the Indiana School, which also underline their unique characteristics—multidisciplinary focus on information, diversity of faculty and students and programs; wide range of research interests while adhering to the central axial principle of "connecting people, technology, and information." She also outlined the disciplinary contours of the new field of information (iField), as evidenced in the research output of iSchools. She also talked briefly about her iSchool experiment—ISiM at Mysore and its success in terms of achieving the convergence of computer science and management science as exemplified by the fact that while some alumni went on to do their PhDs and joined the faculty of computer science and some others' career trajectory weaning towards management science including in the corporate sector.

Session 1:

"The iSchool movement is growing strong and has become truly international with 40% of Schools from the North American region, and Europe and Asia-Pacific each having 30% of the schools in the 122 member organization now," said **Professor Michael S. Seadle**, Executive Director of the iSchools Inc. and professor at the Berlin School of Library and Information Science at Humboldt-Universitaet zu Berlin. The Berlin School was the first to join from Europe, and as head of the Berlin School, Seadle was instrumental in the internationalization of these efforts . He highlighted the multidisciplinary character of iSchools

by taking the example of his school. Just as information is international, faculty, research interests, and students represent diverse disciplines—from natural sciences to humanities and social sciences. While "information behavior" continues to be the focus of studies, the Berlin School evidences the computer science side of the information profession through its research into the machine learning related aspects, he said. While sharing his experience of collaborations within the iSchool faculty and other disciplines, Seadle emphasized the need to delve deeper into the study of "information Integrity" issues such as quality and measurement.   One of the critical aspects of building a global iSchool Community (iCommunity), he said, is opportunities for global collaborations and cited the example of Berlin School's collaborative project with Wuhan University in China.

Bringing the topics of "convergence' and "metrics" to the discussion table, **Professor Gangan Prathap**, Outstanding Scientist, CSIR – National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, shared his experience with the Council of Scientific and Industrial Research (CSIR) (Government of India) and its four different institutions in the information sciences domain such as National Institute Of Science Communication And Information Resources (CSIR–NISCAIR), National Institute of Science, Technology and Development Studies (NISTADS), CSIR Unit for Research and Development of Information Products (URDIP) and the Fourth Paradigm Institute (CSIR–FPI). (in January 2021, NISCAIR and NISTADS were merged into a new entity—CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR.) Gangan Prathap underscored the importance of metrics drawing analogies from Eugene Garfield's citation ranking to Google's page ranking and the National Institutional Ranking Framework (NIRF)'s recent activities in this domain. According to him, mathematics is the basic discipline substructure of information science. He advocated the significance of the metrics of science and the science of metrics, arguing for the inclusion of "Informetrics and Scientometrics" as an integral part of the iField.

Professor Gobinda Choudhury, currently the chair of the iSchools Organization and professor of information science, University of Strathclyde, Glasgow, UK encapsulated the characteristics of iSchool using the acronym PRIDE: **P**eople Centric—teaching and research aimed at developing and using human cantered digital technologies and policies for living and learning; **R**esearch-Intensive, as it is a crucial criterion for membership to the organization; **I**nternational outlook in all of their activities ranging from recruitment of students to fostering research and industry partnership; **I**nclusiveness and Diverse as demonstrated by the expertise and diverse disciplinary background of faculty and research activities adding unique and complementary value; and **E**volving, demonstrated through membership, stakeholders, policies and engagement activities. Using PRIDE as a framework, he gave a brief overview of the Strathclyde School's academic profile. Strathclyde, having a faculty cohort belonging to diverse disciplines such as mathematics, linguistics, and many engineering branches and others, including library sciences, could get multibillion-dollar research grants and conduct cutting-edge cross-disciplinary research through their research groups. He said the Human Centric AI Research Group and its focus on digital health at Strathclyde exemplify this. He emphasized that library science has always been very technology dominated and iSchools have extended and expanded this close relationship. He also underscored the importance of understanding market needs.

Continuing the theme of convergence, **Professor Shaji Gopinath**, Vice-Chancellor, Kerala University of Digital Science, Innovation & Technology, Thiruvananthapuram, spoke about the

convergence of the physical, biological, and the digital world today and called on the products of iSchools to involve in steering this convergence today. Given that the digital world is moving from structured to unstructured data, he urged the iCommunity to focus its attention on adding value to the process of unstructured data management. He added, integrity and reliability of data are critically essential attributes and consequently deserve our attention. Professor Gopinath made a crucial recommendation for the information profession—transforming from the current supportive role to a strategic role of a binding force for other disciplines and professions within and outside the universities. This view is in line with what some of the experts in the information field having been saying—information science is a meta-discipline or the invisible substrate, as Marcia Bates of UCLA Information School says.

Session 2:

The second session of the program began with **Professor George Buchannan**, director of the iSchool at the University of Melbourne, Australia. Tracing the intellectual antecedents of his school to the substantial information retrieval research and human-computer interactions research and paying tributes to his predecessors, Buchannan underlined the fact that information is not only a product but a process as well. He also mentioned some of the library world's learnings and borrowings, significantly how 'browsing" has transformed information retrieval effectiveness today. Highlighting the importance of inclusivity and diversity, Buchannon spoke about the role of cognitive biases and the importance of digital ethics. He also underscored the criticality of cybersecurity for organizational safety and the role of information professionals in this domain.

Professor S. Sadagopan, Director, International Institute of Information Technology, Bangalore (IIITB), acknowledged that Information Technology Schools such as the IIITB have historically neglected the "human" side of computing. However, there has been a change in recent years, as is evidenced by some of the exciting experiments and projects carried out at his school. He mentioned two projects: the "Smart Cities," which had multidisciplinary teams including experts in geography and urban planning, and the "Aadhaar, the Unique Identification Number System in India" project at their Centre for IT and Public Policy, which studies how digital identity system affects the relationship between state and citizen, with its multidisciplinary teams from sociology, political science, economics, and others. He also spoke about the M.Sc. in Digital Societies program — a unique interdisciplinary post-graduate program at the intersection of information technology and social sciences for students from diverse disciplinary backgrounds. He said this new academic program opened up unique possibilities. "Identity Management" challenges balancing privacy and security could be a fertile ground for research for iSchools, he opined. When we are moving towards open data, society needs to confront the privacy issues, he said. Citing the example of "reaching one true version of data" coined by SAP or "sacred data" (as he called it) is another vital area of work that iSchools could focus their attention on, he said.

Drawing attention to the legacy of library catalogs, **Professor Deepak Phatak**, professor emeritus of computer science and engineering, Indian Institute of Technology, Bombay, opined that "well curated-searchable-readable metadata" (semantic web) and developing and deploying standards for the same as an answer to the challenges of managing the astounding amount of information and educational resources available in the repositories and on the web.

Professor Phatak, cited the example of the Connexions project (now OpenStax CNX) at Rice University—an open repository of educational materials and tools available free of charge to anyone under open-content and open-source licenses, to promote sharing and exploration of knowledge as a dynamic continuum of interrelated concepts. He went on to elaborate on the open content, open learning resources, information resources available under creative commons and how indexing, cataloging, curating them would enhance and enrich their value and help digital assets management. He urged the information profession to make it a priority to be involved, contribute, and be part of that movement.

Anchored to his disciplinary background and career journey and the iSchool movement, **Professor Shigeo Sugimoto** of the University of Tsukuba, Japan, explained his take on the position of the information field at the intersection of people, technology, and data sources. In Japan, there is computer engineering and information science and no computer science, he said. He opined that information and IT are different and reiterated that iSchools are cross-disciplinary and information-centric. According to him, the two different notions of information —from the IT and the LIS perspectives, are coming closer now with the iSchools. He also elaborated on how recognizing "diversities in culture and development" led to the formation of CiSAP (Consortium of iSchools of Asia-Pacific) in the late 1990s and the origins of the Asia-Pacific region of the iSchools organization. Taking the University of Tsukuba as a case study — while only 20% of the faculty had IT background in the 1980s, today more than 50% have an IT background, including a significant increase of faculty members in Data Science/Engineering and Human-Computer Interaction, Digital Media Technology/Arts — he highlighted the transformations that iSchools have brought about. The shrinking library job market and expanding one for the IT is also one of the forces shaping the forging of iSchools.

Session 3:

Representing one of the recent members of iSchool organization and organizer of the recent iConference — annual conference of the iCommunity in 2019, professor Sohaimi Zakaria, Dean, Faculty of Information Management, Universiti Teknologi MARA (UiTM), Malaysia, provided a brief overview of the forty-year journey of his school starting in 1968 as a unit of the School of Law and Administrative Sciences, offering fulltime program in librarianship preparing for British Associate of the Library Association (ALA, UK) transforming itself into an iSchool and becoming a member of iSchools organization in 2018. The UiTM School focused on Multidisciplinary approaches; Visibility (rankings); Influence (job market); Identity (humanizing technology); Acceptance (buy-ins) could confront some of the challenges such as—mindset; capacity building; merger with other disciplines and schools; multidisciplinary research with partners; and mandate from the top management. He said the school is now poised to add new programs in areas such as data sciences and digital humanities, leveraging the existing expertise in data analytics, blockchain technology, cybersecurity, and recruiting new talent with technical skills. The UiTM I School offers an excellent model for library schools to emerge as iSchools offering diverse programs backed by multidisciplinary faculty, robust institutional mechanisms, and putting in place suitable processes and systems.

Advocating a radical transformation of LIS Education rather than a cosmetic name change, **Professor R.K. Shevgaonkar**, former director of IIT Bombay and former Vice-Chancellor of Pune University, suggested that LIS could be a vertical in the broad tent of a broader

disciplinary framework of information. As an electrical engineer, he invoked the Shannon's Information Theory and encouraged the information profession to develop and deploy a broader information framework. It is to be noted that information science has not only wrestled with and adapted the Shannon Theory into the disciplinary foundations as evidenced by the research literature and conference series such as CoLIS (Conceptions of Library and Information Science(organized since 1991.) IT has accelerated access to information and expanded the creation, and therefore the challenges of information analysis and management of unstructured information are humongous. He not only recommended the dropping of the word library from the degree nomenclature and strongly advised to confer with the industry and listen to their requirements in terms of knowledge and skillsets and strategize the direction of the information profession.

Citing iSchools' identity statement—People, Technology and Information, **Professor K.R.Srivatsan,** former director, Indian Institute of Information Technology and Management, Kerala, stressed the importance of virtual learning and brought the need for the establishment of an education cloud into focus. He also shared his experience with the Jharkhand Education Grid as an advisor and outlined the Technology Augmented Learning and Course Management System(TALCoM.) built over Open Educational Resources, such as the NPTEL (The National Programme on Technology Enhanced Learning) of the Ministry of Human Resource Development, Government of India) and others, TALCoM is a collaborative and academically rigorous system of quality assured education, he said. He urged iSchools to support eLearning by integrating digital libraries seamlessly into the education cloud. The challenge for iSchools is the effective integration of the "people," "technology," and "information" in the eLearning environments he held forth.

The information industry perspective was tabled by **Mr. N.V.Sathyanarayana**, Chairman and Managing Director of Informatics India Ltd. Taking Google as an example, he believes that technology is the backbone, even though the product and services are information. While computer science and technology have played a significant role in creating and dominating the information industry, the underlying processes have fundamentally remained the same. In addition to the fact that the critical algorithm behind page ranking is derived from the citation indexing principle of Eugene Garfield, Google is a spinoff from the National Science Foundation's Digital Libraries Initiative 1 (1994-1998) funded project at the Stanford University. Another classic exemplar of this alliance between IT and library/information processes and functions is Brewster Kahle — a computer engineer and Internet entrepreneur who founded the Internet Archive and Alexa — who now proudly calls himself a digital librarian and a strong advocate of universal access to all knowledge. The membership composition of SIIA (Software and Information Industry Association) illustrates the intertwined relationship between IT and IS, Sathyanarayana argued. Information as an object — from books to web pages is shaped and refined by technology, and sometimes this tight coupling blurs the distinction between the two. In essence, the convergence of information technology and information science has given rise to the information industry, and the evolution of iSchools echoes the same, he said. iSchools can emerge as a strong global academic brand that orchestrates and facilitates information and technology convergence.

Conclusions:

The brainstorming session set the intellectual directions and content for the iSchools. It reiterated and reinforced the emergent and evolving nature of iSchools and demonstrated that characteristics of multidisciplinarity, diversity, and convergence are not simply rhetorical statements but exemplified in their program offerings, research agendas, and faculty and student cohorts. Some of the vexing issues of "Unstructured information management'; "Data and Information Integrity"; "Security and privacy of data/information"; "Unbiased Human Information Interaction"; "Semantic Web": "Seamless integration of information resources with eLearning" and others could be the research focus of iSchools. Furthermore, developing a unifying theoretical framework for the multidiscipline or meta-discipline remains a challenge. Securing a unique position and brand for the information profession and becoming a binding force for other disciplines and research groups is both an opportunity and a challenge.

The iSchool model offers an excellent opportunity for the SVU Department of Library and Information Science to move forward in the right direction. A series of meetings and brainstorming workshops in collaboration with the related departments such as the Department of Data Science and Technology, K J Somaiya Institute of Management, Department of Computer Engineering, K J Somaiya College of Engineering, and K J Somaiya Institute of Engineering & Information Technology, may be considered. These meetings would help further flesh out and concretize the idea and develop a plan of action for bringing the idea of iSchool@Somaiya to fruition.

Speakers:

1. Professor George Buchanan
   Director, iSchool,
   University of Melbourne, Australia

2. Professor Gobinda Chowdhury
   Professor of Information Science,
   Department of Computer & Information Sciences,
   University of Strathclyde, Glasgow, UK.
   &
   Chair, iSchools Organization

3. Professor Shaji Gopinath
   Vice-Chancellor
   Kerala University of Digital Science, Innovation & Technology,
   Thiruvananthapuram, Kerala

4. Professor Gangan Pratap
   Outstanding Scientist, CSIR – National Institute for Interdisciplinary Science and Technology (NIIST), Thiruvananthapuram, Kerala
   &
   Former Director,
   National Institute of Science Communication and Information Resources (NISCAIR), New Delhi

5. Professor Deepak Phatak,
   Professor Emeritus, Computer Science & Engineering
   IIT, Bombay

6. Professor V. N. Rajasekharan Pillai
   Vice-Chancellor
   Somaiya Vidyavihar University,
   Mumbai

7. Professor S. Sadagopan
   Director, International Institute of Information Technology, Bangalore

8. Shri. N.V. Sathyanarayana
   Chairman and Managing Director
   Informatics India Ltd.
   Bengaluru

9. Professor Michael Seadle
   Professor, Humboldt-Universität zu Berlin
   Director, HEADT Centre
   Executive Director, iSchools, Inc.

10. Professor R.K. Shevgaonkar,
    Former Director, IIT, Delhi
    Former Vice Chancellor, University of Pune
    Professor of Electrical Engineering, IIT, Bombay

11. Professor K. R. Srivathsan
    Visiting Professor, IIT Bhubaneshwar-,
    Former Director IIITM, Kerala

12. Professor Shiego Sugimoto,
    Professor Emeritus
    University of Tsukuba, Japan

13. Professor Shalini R. Urs
    Founder and Trustee
    MYRA School of Business
    &
    Former Executive Director and Professor
    International School of Information Management
    University of Mysore.
    Mysuru

14. Professor Sohaimi Zakaria
    Professor, Faculty of Information Management,
    Universiti Teknologi MARA (UiTM), Shah Alam, Selangor,
    Malaysia